

**Defense Information Infrastructure (DII)
Common Operating Environment (COE)**

**Software Version Description (SVD) for
Developer's Toolkit Version 3.2.0.2 (Solaris 2.5.1)**

Document Version 1.0

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Prepared for:

Defense Information Systems Agency

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1. Scope

1.1 Identification

This Software Version Description (SVD) describes the Defense Information Infrastructure (DII) Common Operating Environment (COE) Developer's Toolkit Version 3.2.0.2 (Solaris 2.5.1). The DII COE Developer's Toolkit Version 3.2.0.2 (Solaris 2.5.1) is intended to be used on Sun hardware running the Solaris 2.5.1 Operating System.

The DII COE Kernel is a Government off-the-shelf (GOTS) package that includes the GOTS described in Section 1.2, *System Overview*.

NOTE: Throughout this document, `Courier` font is used to indicate entries to be typed at the keyboard, UNIX commands, file and directory names, and screen text. For example:

The file is located in the `DII_DEV` directory.

1.2 System Overview

DII COE developer's tools were developed to aid the developer in the creation and ultimate installation of DII COE segments. The tools make software integration a largely automated process, thus significantly reducing development time while automatically allowing detection of potential integration and runtime problem areas.

By default, developer's tools are located underneath the `DII_DEV` directory and are distributed as part of the Developer's Toolkit. The actual location of the Developer's Toolkit may vary from system to system because it is installed by means of a `tar` command. For example, if the toolkit is tarred to `/h`, the path would be `/h/DII_DEV`.

This delivery consists of the following items:

- C 11 developer tools (`CalcSpace`, `CanInstall`, `ConfigDef`, `ConvertSeg`, `MakeAttribs`, `MakeInstall`, `TestInstall`, `TestRemove`, `TimeStamp`, `VerifySeg`, and `VerUpdate`)
- C `include` files, located in the `include` directory
- C public Application Programmer Interface (API) libraries, located in the `libs` directory
- C a data file called `TapeSizes`, located in the `data` directory, which contains a list of known tape devices
- C an environment setup script called `MakeTOOLSEnv`, located in the `Scripts` directory

- C public API examples, located in the `examples` directory; and (10) sample segments, located in the `SampleSegments` directory.

Developer's Tools

The developer's tools can be run from the command line, and some can be run from other code using published APIs. The following tools are included in the DII COE Developer's Toolkit Version 3.2.0.2 delivery. The *DII COE Programmer's Manual* describes these tools and their functionality in more detail.

- C **CalcSpace** Version 1.0.0.6—Computes the space required for the segment specified and updates the hardware descriptor.
- C **CanInstall** Version 1.0.0.9—Tests a segment to see if it can be installed, which means that all required segments must already be on the disk, and the disk cannot have any conflicting segments.
- C **ConfigDef** Version 1.0.0.1—Creates a distribution definition from a list of segments.
- C **ConvertSeg** Version 1.0.0.9—Examines a segment's segment descriptors and converts them to the *DII COE Integration and Runtime Specification* segment format. Refer to the *DII COE Integration and Runtime Specification Version 2.0* for more information about the DII COE segment format.
- C **MakeAttribs** Version 1.0.0.9—Creates the descriptor file `FileAttribs`, which recursively traverses every subdirectory beneath the segment home directory and creates a file with lines in the proper format.
- C **MakeInstall** Version 1.0.1.9—Writes one or more segments to an installation medium or packages the segments for distribution over the network.
- C **TestInstall** Version 1.0.0.11—Installs a segment (temporarily) that already resides on disk.
- C **TestRemove** Version 1.0.0.10—Removes a segment that was installed by `TestInstall`.
- C **TimeStamp** Version 1.0.0.8—Puts the current time and date into the `VERSION` descriptor of the specified segment.
- C **VerifySeg** Version 1.0.0.12—Validates that a segment conforms to the rules for defining a segment.
- C **VerUpdate** Version 1.0.1.7—Increments the segment version number and updates the date and time in the `VERSION` descriptor of the specified segment.

include Directory

Public `include` files are used to compile with the public APIs. Public `include` files are located in the `DII_DEV/include` directory.

libs Directory

Public API libraries are located in the `DII_DEV/libs` directory.

TapeSizes Data File

The `TapeSizes` data file is located in the `DII_DEV/data` directory. The data file contains a list of known tape devices. This is used as a convenience feature with the `MakeInstall` tool.

NOTE: The environment variable `TOOLS_DATA` must be set and pointing to `DII_DEV/data` to allow `MakeInstall` to access this file.

MakeTOOLSEnv Setup Script

The `MakeTOOLSEnv` setup script is located in the `DII_DEV/Scripts` directory. The script defines the environment variables required for developer's tools processing.

examples Directory

The `examples` directory contains a list of example C programming files that show developers how to use the public APIs. The required public `include` files are also shown. Examples are located in the `DII_DEV/examples` directory.

Reporting Problems

To receive immediate assistance with a problem or to report a problem, call the DII COE Hotline at (703) 735-8681 (DSN 653-8681) between the hours of 9:00 a.m. to 5:00 p.m. Eastern Standard Time. You can also send a facsimile at (703) 735-3080 (DSN 653-3080), send an email message to hotlinec@ncr.disa.mil, or look on the DII COE Hotline Web site at the following URL: <http://spider.osfl.disa.mil/dii/hotline/index.html>. The DII COE Hotline is located at the Operational Support Facility (OSF) in Sterling, Virginia.

1.3 Product Information

- Product Qualification:** The DII COE Developer's Toolkit Version 3.2.0.2 was validated and accepted by the INRI Systems Engineering Group in accordance with the *Defense Information Infrastructure (DII) Common Operating Environment (COE) Software Test Plan (STP) for Kernel Version 3.2.0.0 Patch 2 and Developer's Toolkit Version 3.2.0.2*, Document Control No. DII.3200.HPSOL.P2.STP-1, November 18, 1997. The qualification that the segment is ready for delivery was issued at the INRI DII COE Kernel Version 3.2.0.0 Patch 2 and Developer's Toolkit Version 3.2.0.2 Delivery Readiness Review on November 15, 1997.
- Product Restrictions:** Copyright Inter-National Research Institute, Inc. 1997, All Rights Reserved. This material may be reproduced by or for the U.S. Government pursuant to the copyright license under the clause at DFARS 252.227-703 (OCT 1988). No other licenses are required for using this software. No freeware or shareware is included.
- Product Dependencies:** The DII COE Developer's Toolkit Version 3.2.0.2 requires the Solaris 2.5.1 Operating System and the DII COE Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1). No implementation constraints or limitations on system configuration apply.

2. Referenced Documents

The following documents are referenced in this Software Version Description (SVD):

- C DII.3200.Sol251.P1.PM-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Programmer's Manual for the Kernel Version 3.2.0.0 Patch 1 and Developer's Toolkit Version 3.2.0.1 (Solaris 2.5.1)*, September 26, 1997
- C DII COE I&RTS:Rev 2.0, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification (I&RTS) Version 2.0*, October 23, 1995
- C DII.3200.HPSOL.P2.STP-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Software Test Plan (STP) for Kernel Version 3.2.0.0 Patch 2 and Developer's Toolkit 3.2.0.2 (HP-UX 10.20/Solaris 2.5.1)*, Document Version 1.0, November 18, 1997

- C DII COE I&RTS:Rev 3.0, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification (I&RTS) Version 3.0*, July 1997
- C DII.3200.Sol251.RG-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Application Programmer Interface (API) Reference Guide (Solaris 2.5.1)*, July 25, 1997.
- C DII.3200.HPSOL.Helper.PM-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Programmer's Manual for Helper Function (HP-UX 10.20/Solaris 2.5.1)*, September 26, 1997
- C DII.3200.Sol251.DTK.3202.IP-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Installation Procedures (IP) for Developer's Toolkit Version 3.2.0.2 (Solaris 2.5.1)*, Document Version 1.0, November 18, 1997
- C DII.3200.Sol251.DTK.VDD-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Version Description Document for the Developer's Toolkit (Solaris 2.5.1)*, July 25, 1997
- C DII.3200.Sol251.DTK.3201.VDD-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Version Description Document for the Developer's Toolkit Version 3.2.0.1 (Solaris 2.5.1)*, September 26, 1997.

3. Version Description

3.1 Inventory of materials released

Magnetic media: Two 8mm tapes consisting of a relative tar of the Developer's Toolkit, Version 3.2.0.2 (Solaris 2.5.1).

Soft-copy Documentation: A 3.5" floppy diskette (WordPerfect 6.0 for Windows format) for each of the following documents:

- C DII.3200.Sol251.DTK.3202.SVD-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Software Version Description (SVD) for Developer's Toolkit Version 3.2.0.2 (Solaris 2.5.1)*, Document Version 1.0, November 18, 1997
- C DII.3200.Sol251.DTK.3202.IP-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Installation Procedures (IP) for Developer's Toolkit Version 3.2.0.2 (Solaris 2.5.1)*, Document Version 1.0, November 18, 1997
- C DII.3200.HPSOL.P2.STP-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Software Test Plan (STP) for Kernel Version 3.2.0.0 Patch 2 and Developer's Toolkit 3.2.0.2 (HP-UX 10.20/Solaris 2.5.1)*, Document Version 1.0, November 18, 1997

- C DII.3200.HPSOL.P2.STD-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Software Test Description (STD) for Kernel Version 3.2.0.0 Patch 2 and Developer's Toolkit 3.2.0.2 (HP -UX 10.20/Solaris 2.5.1)*, Document Version 1.0, November 18, 1997
- C DII.3200.HPSOL.P2.STR-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Software Test Report (STR) for Kernel Version 3.2.0.0 Patch 2 and Developer's Toolkit 3.2.0.2 (HP-UX 10.20/Solaris 2.5.1)*, Document Version 1.0, November 18, 1997.

Hard-copy Documentation: Two hard copies of the aforementioned documents.

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NOTE: Although not part of this developer's toolkit delivery, the *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Programmer's Manual for Kernel Version 3.2.0.0 Patch 1 and Developer's Toolkit Version 3.2.0.1 (Solaris 2.5.1)*, Document Control No. DII.3200.Sol251.PM-1, September 26, 1997, provides relevant information on how to use the developer's tools. Additional information regarding the developer tools can be obtained from the *Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification Version 2.0*, Document Control No. DII COE I&RTS:Rev 2.0, October 23, 1995, and the *Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification Version 3.0*, Document Control No. DII COE I&RTS:Rev 3.0, July 1997. The *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Application Programmer Interface Reference Guide (Solaris 2.5.1)*, Document Control No. DII.3200.Sol251.RG-1, June 13, 1997, provides information on public APIs. For information on APIs specific to Helper Function, see the *DII COE Programmer's Manual for Helper Function (HP-UX 10.20/Solaris 2.5.1)*, Document Control No. DII.3200.HPSOL.Helper.PM-1, September 26, 1997.

3.2 Inventory of Software Contents

The following files, which make up the Developer's Toolkit, are dated November 13, 1997.

File Name, Version

DII_DEV/libs/libCOE_Is_Permitted.a
 DII_DEV/libs/libPrintClient.a
 DII_DEV/libs/libCOECORE.a
 DII_DEV/libs/libCOE.a
 DII_DEV/libs/libSSOProfiles.a
 DII_DEV/libs/libCOETools.a
 DII_DEV/libs/libMEUtils.a
 DII_DEV/bin/CalcSpace, 1.0.0.6
 DII_DEV/bin/ConvertSeg, 1.0.0.9
 DII_DEV/bin/MakeAttribs, 1.0.0.9
 DII_DEV/bin/MakeInstall, 1.0.1.9
 DII_DEV/bin/CanInstall, 1.0.0.9
 DII_DEV/bin/VerifySeg, 1.0.0.12
 DII_DEV/bin/TestInstall, 1.0.0.11
 DII_DEV/bin/TestRemove, 1.0.0.10
 DII_DEV/bin/TimeStamp, 1.0.0.8
 DII_DEV/bin/VerUpdate, 1.0.1.7
 DII_DEV/bin/ConfigDef, 1.0.0.1
 DII_DEV/SampleSegments/SampleAcctGrp/tmp/objs/SACCTGMain/SampleAcctGrp.o
 DII_DEV/SampleSegments/SampleAcctGrp/bin/SACCTGMain
 DII_DEV/SampleSegments/SampleAcctGrp/Scripts/.Xdefaults
 DII_DEV/SampleSegments/SampleAcctGrp/Scripts/.Xdefaults.SACCTG
 DII_DEV/SampleSegments/SampleAcctGrp/Scripts/.cshrc
 DII_DEV/SampleSegments/SampleAcctGrp/Scripts/.cshrc.SACCTG
 DII_DEV/SampleSegments/SampleAcctGrp/Scripts/.login
 DII_DEV/SampleSegments/SampleAcctGrp/Scripts/.mwsrc.runtime
 DII_DEV/SampleSegments/SampleAcctGrp/Scripts/.mwsrc
 DII_DEV/SampleSegments/SampleAcctGrp/Scripts/.xsession
 DII_DEV/SampleSegments/SampleAcctGrp/Scripts/.xsession.SACCTG
 DII_DEV/SampleSegments/SampleAcctGrp/Scripts/RunSACCTG
 DII_DEV/SampleSegments/SampleAcctGrp/SegDescrip/ReleaseNotes
 DII_DEV/SampleSegments/SampleAcctGrp/SegDescrip/SegName
 DII_DEV/SampleSegments/SampleAcctGrp/SegDescrip/VERSION
 DII_DEV/SampleSegments/SampleAcctGrp/SegDescrip/SegInfo
 DII_DEV/SampleSegments/SampleAcctGrp/SegDescrip/DEINSTALL
 DII_DEV/SampleSegments/SampleAcctGrp/SegDescrip/PostInstall
 DII_DEV/SampleSegments/SampleAcctGrp/data/Icons/SAcctGrpIcon
 DII_DEV/SampleSegments/SampleAcctGrp/data/Menus/SAcctGrp.main
 DII_DEV/SampleSegments/SampleAgg/tmp/objs/SAGGMain/SampleAgg.o
 DII_DEV/SampleSegments/SampleAgg/bin/SAGGMain
 DII_DEV/SampleSegments/SampleAgg/Scripts/.cshrc.SAGG
 DII_DEV/SampleSegments/SampleAgg/SegDescrip/ReleaseNotes
 DII_DEV/SampleSegments/SampleAgg/SegDescrip/SegName
 DII_DEV/SampleSegments/SampleAgg/SegDescrip/VERSION
 DII_DEV/SampleSegments/SampleAgg/SegDescrip/SegInfo
 DII_DEV/SampleSegments/SampleAgg/SegDescrip/DEINSTALL
 DII_DEV/SampleSegments/SampleAgg/SegDescrip/PostInstall

DII_DEV/SampleSegments/SampleAgg/data/Icons/SAGGIcon
DII_DEV/SampleSegments/SampleAgg/data/Menus/Menus.SAGG
DII_DEV/SampleSegments/SampleAggChild/tmp/objs/SAGGCMain/SampleAggChild.o
DII_DEV/SampleSegments/SampleAggChild/bin/SAGGCMain
DII_DEV/SampleSegments/SampleAggChild/Scripts/.cshrc.SAGGC
DII_DEV/SampleSegments/SampleAggChild/SegDescrip/ReleaseNotes
DII_DEV/SampleSegments/SampleAggChild/SegDescrip/SegName
DII_DEV/SampleSegments/SampleAggChild/SegDescrip/VERSION
DII_DEV/SampleSegments/SampleAggChild/SegDescrip/SegInfo
DII_DEV/SampleSegments/SampleAggChild/SegDescrip/DEINSTALL
DII_DEV/SampleSegments/SampleAggChild/SegDescrip/PostInstall
DII_DEV/SampleSegments/SampleAggChild/data/Icons/SAGGIcon
DII_DEV/SampleSegments/SampleAggChild/data/Menus/Menus.SAGGC
DII_DEV/SampleSegments/SampleSW/tmp/objs/SSWMain/SampleSW.o
DII_DEV/SampleSegments/SampleSW/bin/SSWMain
DII_DEV/SampleSegments/SampleSW/Scripts/.cshrc.SSW
DII_DEV/SampleSegments/SampleSW/SegDescrip/ReleaseNotes
DII_DEV/SampleSegments/SampleSW/SegDescrip/SegName
DII_DEV/SampleSegments/SampleSW/SegDescrip/VERSION
DII_DEV/SampleSegments/SampleSW/SegDescrip/SegInfo
DII_DEV/SampleSegments/SampleSW/SegDescrip/DEINSTALL
DII_DEV/SampleSegments/SampleSW/SegDescrip/PostInstall
DII_DEV/SampleSegments/SampleSW/data/Icons/SSWIcon
DII_DEV/SampleSegments/SampleSW/data/Menus/Menus.SSW
DII_DEV/SampleSegments/SampleSW2/tmp/objs/SSWMain/SampleSW.o
DII_DEV/SampleSegments/SampleSW2/bin/SSWMain
DII_DEV/SampleSegments/SampleSW2/Scripts/.cshrc.SSW
DII_DEV/SampleSegments/SampleSW2/SegDescrip/ReleaseNotes
DII_DEV/SampleSegments/SampleSW2/SegDescrip/SegName
DII_DEV/SampleSegments/SampleSW2/SegDescrip/VERSION
DII_DEV/SampleSegments/SampleSW2/SegDescrip/SegInfo
DII_DEV/SampleSegments/SampleSW2/SegDescrip/PostInstall
DII_DEV/SampleSegments/SampleSW2/data/Icons/SSWIconMenu
DII_DEV/SampleSegments/SampleSW2/data/Menus/SAMenus.SSW
DII_DEV/SampleSegments/SampleSW.P1/tmp/objs/SPATCHMain/SamplePatch.o
DII_DEV/SampleSegments/SampleSW.P1/bin/SPATCHMain
DII_DEV/SampleSegments/SampleSW.P1/SegDescrip/ReleaseNotes
DII_DEV/SampleSegments/SampleSW.P1/SegDescrip/SegName
DII_DEV/SampleSegments/SampleSW.P1/SegDescrip/VERSION
DII_DEV/SampleSegments/SampleSW.P1/SegDescrip/SegInfo
DII_DEV/SampleSegments/SampleSW.P1/SegDescrip/DEINSTALL
DII_DEV/SampleSegments/SampleSW.P1/SegDescrip/PostInstall
DII_DEV/SampleSegments/SampleCOTS/SegDescrip/ReleaseNotes
DII_DEV/SampleSegments/SampleCOTS/SegDescrip/SegName
DII_DEV/SampleSegments/SampleCOTS/SegDescrip/VERSION
DII_DEV/SampleSegments/SampleCOTS/SegDescrip/SegInfo
DII_DEV/SampleSegments/SampleCOTS/SegDescrip/DEINSTALL
DII_DEV/SampleSegments/SampleCOTS/SegDescrip/PostInstall
DII_DEV/SampleSegments/SampleCOTS/etc/f1
DII_DEV/SampleSegments/SampleCOTS/etc/f2
DII_DEV/SampleSegments/SampleCOTS/etc/f3
DII_DEV/SampleSegments/SampleCOTS/usr/lib/f6
DII_DEV/SampleSegments/SampleCOTS/usr/lib/f7
DII_DEV/SampleSegments/SampleCOTS/usr/lib/f8

DII_DEV/SampleSegments/SampleCOTS/usr/lib/f9
DII_DEV/SampleSegments/SampleCOTS/usr/local/f4
DII_DEV/SampleSegments/SampleCOTS/usr/local/f5
DII_DEV/SampleSegments/SampleDataGlobal/SegDescrip/ReleaseNotes
DII_DEV/SampleSegments/SampleDataGlobal/SegDescrip/SegName
DII_DEV/SampleSegments/SampleDataGlobal/SegDescrip/VERSION
DII_DEV/SampleSegments/SampleDataGlobal/SegDescrip/SegInfo
DII_DEV/SampleSegments/SampleDataGlobal/SegDescrip/DEINSTALL
DII_DEV/SampleSegments/SampleDataGlobal/SegDescrip/PostInstall
DII_DEV/SampleSegments/SampleDataGlobal/data/Floating/class_a.dat
DII_DEV/SampleSegments/SampleDataGlobal/data/Floating/class_b.dat
DII_DEV/SampleSegments/SampleDataGlobal/data/Floating/class_c.dat
DII_DEV/SampleSegments/SampleDataGlobal/data/Proximity/class_a.dat
DII_DEV/SampleSegments/SampleDataGlobal/data/Proximity/class_b.dat
DII_DEV/SampleSegments/SampleDataGlobal/data/Proximity/class_c.dat
DII_DEV/SampleSegments/SampleDataGlobal/data/Land/class_a.dat
DII_DEV/SampleSegments/SampleDataGlobal/data/Land/class_b.dat
DII_DEV/SampleSegments/SampleDataGlobal/data/Land/class_c.dat
DII_DEV/SampleSegments/SampleDataLocal/SegDescrip/ReleaseNotes
DII_DEV/SampleSegments/SampleDataLocal/SegDescrip/SegName
DII_DEV/SampleSegments/SampleDataLocal/SegDescrip/VERSION
DII_DEV/SampleSegments/SampleDataLocal/SegDescrip/SegInfo
DII_DEV/SampleSegments/SampleDataLocal/SegDescrip/DEINSTALL
DII_DEV/SampleSegments/SampleDataLocal/SegDescrip/PostInstall
DII_DEV/SampleSegments/SampleDataLocal/data/Floating/class_a.dat
DII_DEV/SampleSegments/SampleDataLocal/data/Floating/class_b.dat
DII_DEV/SampleSegments/SampleDataLocal/data/Floating/class_c.dat
DII_DEV/SampleSegments/SampleDataLocal/data/Proximity/class_a.dat
DII_DEV/SampleSegments/SampleDataLocal/data/Proximity/class_b.dat
DII_DEV/SampleSegments/SampleDataLocal/data/Proximity/class_c.dat
DII_DEV/SampleSegments/SampleDataLocal/data/Land/class_a.dat
DII_DEV/SampleSegments/SampleDataLocal/data/Land/class_b.dat
DII_DEV/SampleSegments/SampleDataLocal/data/Land/class_c.dat
DII_DEV/SampleSegments/SampleDataSegment/SegDescrip/ReleaseNotes
DII_DEV/SampleSegments/SampleDataSegment/SegDescrip/SegName
DII_DEV/SampleSegments/SampleDataSegment/SegDescrip/VERSION
DII_DEV/SampleSegments/SampleDataSegment/SegDescrip/SegInfo
DII_DEV/SampleSegments/SampleDataSegment/SegDescrip/DEINSTALL
DII_DEV/SampleSegments/SampleDataSegment/SegDescrip/PostInstall
DII_DEV/SampleSegments/SampleDataSegment/data/Floating/class_a.dat
DII_DEV/SampleSegments/SampleDataSegment/data/Floating/class_b.dat
DII_DEV/SampleSegments/SampleDataSegment/data/Floating/class_c.dat
DII_DEV/SampleSegments/SampleDataSegment/data/Proximity/class_a.dat
DII_DEV/SampleSegments/SampleDataSegment/data/Proximity/class_b.dat
DII_DEV/SampleSegments/SampleDataSegment/data/Proximity/class_c.dat
DII_DEV/SampleSegments/SampleDataSegment/data/Land/class_a.dat
DII_DEV/SampleSegments/SampleDataSegment/data/Land/class_b.dat
DII_DEV/SampleSegments/SampleDataSegment/data/Land/class_c.dat
DII_DEV/examples/COEAskUser_example.c
DII_DEV/examples/COEFindSeg_example.c
DII_DEV/examples/COEInstError_example.c
DII_DEV/examples/COEMsg_example.c
DII_DEV/examples/COEPromptPasswd_example.c
DII_DEV/examples/COEPrompt_example.c

DII_DEV/examples/COEUpdateHome_example.c
DII_DEV/examples/Makefile
DII_DEV/examples/VDirectPrintFile_example.c
DII_DEV/examples/VDirectPrintMsg_example.c
DII_DEV/examples/VPrintFile_example.c
DII_DEV/examples/VPrintMsg_example.c
DII_DEV/examples/close_printer_example.c
DII_DEV/examples/get_printer_descriptions_example.c
DII_DEV/examples/get_printer_name_example.c
DII_DEV/examples/get_printer_type_example.c
DII_DEV/examples/open_printer_example.c
DII_DEV/examples/page_break_example.c
DII_DEV/examples/write_printer_array_example.c
DII_DEV/examples/write_printer_example.c
DII_DEV/examples/EM_get_current_printer_desc.sh
DII_DEV/examples/EM_get_current_printer_name.sh
DII_DEV/examples/EM_get_current_printer_type.sh
DII_DEV/README
DII_DEV/data/TapeSizes
DII_DEV/Scripts/MakeTOOLSEnv
DII_DEV/man/man5/MEAddMenus.5
DII_DEV/man/man5/MEChkSecurity.5
DII_DEV/man/man5/MECleanup.5
DII_DEV/man/man5/MEClose.5
DII_DEV/man/man5/MEDeleteMenus.5
DII_DEV/man/man5/MEExecProg.5
DII_DEV/man/man5/MEFlashIcon.5
DII_DEV/man/man5/MEGetEvent.5
DII_DEV/man/man5/MEGetMBWidget.5
DII_DEV/man/man5/MEGetNextEvent.5
DII_DEV/man/man5/MEIcon2Str.5
DII_DEV/man/man5/MELocalMenuBar.5
DII_DEV/man/man5/MEOpen.5
DII_DEV/man/man5/MEStr2Icon.5
DII_DEV/man/man5/METextAlert.5

3.3 Changes Installed

3.3.1 Developer's Toolkit Changes from Version 3.2.0.1 to Version 3.2.0.2

The DII COE Developer's Toolkit Version 3.2.0.2 encompasses the following change between Version 3.2.0.1 and Version 3.2.0.2:

DII COE Developer's Toolkit Version 3.2.0.2 (Solaris 2.5.1) Software Changes
Total Software Changes: [1]
INRI Number: RTO00002066
Agency Number: None
Short Description: Helper function not invoked for database descriptor.
Long Description: The "Database" Descriptor does not call the HelperFunction. VerifySeg displays an error and does not invoke the helper function.

3.3.2 Developer's Toolkit Changes Rolled Up from Version 3.2.0.1

The DII COE Developer's Toolkit Version 3.2.0.2 also encompasses a roll-up of the following changes implemented in Version 3.2.0.1:

- C The tool ConfigDef has been added to support distributions. Distributions simplify the installation procedure by allowing the user to install logically grouped segments known as bundles or configurations.
- C Several tools (e.g., CanInstall, MakeInstall, TestInstall, TestRemove, and VerifySeg) and APIs have been modified to support Helper Functions. Helper Functions allow the DII COE tools to be extensible to accommodate new technologies. For information on how to create and use helper functions, refer to the *DII COE Version 3.2.0.0 Programmer's Manual for Helper Function*.

The software changes are listed in order of INRI Number.

DII COE Version 3.2.0.0 Developer's Toolkit Version 3.2.0.1 (Solaris 2.5.1) Software Changes
Total Software Changes: [2]
INRI Number: RTO00001646 Agency Number: D70368 Short Description: Multiple account groups cannot be specified. Long Description: Page 5-94 of the I&RTS states that the user may have "one or more \$SEGMENTS lines" in the SegName file, which would allow the segment to belong to more than one account group. It appears, however, that only the first \$SEGMENT is recognized when a segment is loaded.
INRI Number: RTO00002015 Agency Number: D70415 Short Description: COE_Is_Permitted API Long Description: Currently, when an application is launched, that application cannot determine the permissions that the current user has for that particular application. This API will allow an application to query to see what permissions a particular user has for running the current application.

3.4 Waivers

The following document waivers have been requested since these documents do not apply to the developer's toolkit. References to other documents are provided as applicable below:

- C Software Product Specification (SPS): This manual does not apply.
- C Database Design Document (DBDD): This manual does not apply.
- C Software Requirements Specification (SRS): This manual does not apply.
- C User's Manual (UM)/Operator's Manual (OM): This manual does not apply. because the Developer's Toolkit is a tar tape and not a segment. Also, all the tools are documented in the *DII COE Programmer's Manual*.
- C System Administrator's Manual (SAM): This manual does not apply because the Developer's Toolkit does not contain an man-machine interface that affects System Administration.
- C Programmer's Manual (PM): See the *DII COE Programmer's Manual*. No software changes between Version 3.2.0.0 Patch 1 and Version 3.2.0.0 Patch 2 affect this manual.
- C API Reference Manual (APIRM): This manual does not apply since no APIs are provided by the Developer's Toolkit.
- C Software Test Plan (STP): The STP will cover both Kernel and Developer's Toolkit testing.

- C Software Test Description (STD): The STD will cover both Kernel and Developer's Toolkit testing.
- C Software Test Report (STR): The STR will cover both Kernel and Developer's Toolkit testing.

3.5 Adaptation Data

None.

3.6 Installation Instructions

For instructions on installing the Developer's Toolkit, refer to the *DII COE Installation Procedures for Developer's Toolkit Version 3.2.0.2*. This Developer's Toolkit requires the system to be loaded with the Solaris 2.5.1 Operating System and the DII COE Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1).

The DII COE Developer's Toolkit Version 3.2.0.2 requires 4.0KB of disk space.

3.7 Possible Problems and Known Errors

There are no known problems and errors for the DII COE Developer's Toolkit Version 3.2.0.2.

4. Notes

This section provides user release notes related to the DII COE Developer's Toolkit Version 3.2.0.2. See the *DII COE Version 3.2.0.0 Version Description Document for the Developer's Toolkit* and the *DII COE Version 3.2.0.0 Version Description Document for the Developer's Toolkit Version 3.2.0.1* for additional notes and software changes relating to Version 3.2.0.0 and Version 3.2.0.1, respectively.

4.1 General Developer's Toolkit Release Notes

- C The user must log in as `root` to install the Developer's Toolkit tape. By doing this, the user will ensure that the tools have the correct permissions and ownerships to simplify use.
- C The tools do not support the `?` command line parameter for help. Help can be displayed for all tools by using the `-h` or `-H` command line parameters.
- C If the `add`, `append`, or `delete` keywords are used in the community `SegDescrip` entry, the brackets "`{ }`" that mark the beginning and end of the text must be the first characters on a new line.
- C The `DII_DEV/Scripts/MakeTOOLSEnvscript` must be sourced by the developer to set the `TOOLS_HOME`, `MACHINE`, `MACHINE_OS`, and `MACHINE_CPU` environment variables.

4.2 Helper Functions

- C Users with new descriptors that have been approved by the DII COE Chief Engineer should ensure that Defense Information Systems Agency (DISA) enters the descriptors into the set of Helper Function databases. To enter this information, the Helper Function developer must provide DISA with the descriptor name and the name of the executable (helper or cleanup) to invoke for each of the corresponding tools. These databases must be delivered from DISA to the developers.
- C Segments that have no unknown descriptors in their `SegInfo` file will not have any new functionality, as the Helper Functions will not be invoked.
- C Helper Function executables for the runtime tools must reside in the `/h/COE/bin` directory.
- C Helper Function executables for the developer's tools must reside in the `/h/DII_DEV/bin` or `/h/COE/bin` directory.
- C When executing the tools using the Helper Function capabilities, the `MACHINE_CPU` environment variable must be set.
- C When running a tool that invokes a Helper Function, the `TOOLS_HOME` environment variable is referenced for the location of the Helper Function `.idx` files (`hf_run.idx`, `hf_dev.idx`, `hf_cln.idx`). If the `TOOLS_HOME` environment variable does not contain the path to the `.idx` files, the tool will default to `/h/COE/data` as the location of the files. The developer must ensure that the `.idx` files are in the directory specified by `TOOLS_HOME` or `/h/COE/data`.
- C The helper function tools use a checksum to validate the `hf_dev.idx` and `hf_cln.idx` database files. Therefore, any helper database files created with the integration release of Helper Function Utility Version 1.0.0.0 will not work with the official release of Helper Function Utility Version 1.0.0.1. Developers who have been using Helper Function Utility 1.0.0.0 will have to upgrade to the official release of Helper Function Utility Version 1.0.0.1 in order to use the helper function facility.

4.3 ConfigDef Tool

- C ConfigDef does not support the `-v1` command line option.
- C The `SEG_DIRS` environment variable must be set if the `-p` parameter is not used.

4.4 ConvertSeg Tool

- C Data descriptors are converted using ConvertSeg, but the developer is responsible for moving the data directory to the proper location. In addition, the data descriptor may require hand tooling.
- C Conversion does not occur against the new DII directory structure when using ConvertSeg. For instance, if the `progs` directory exists instead of the `bin` directory, no error is generated and no translation occurs. Path names remain the same in the descriptor files and in the directory.
- C ConvertSeg does not create a `SegDescrip.NEW` directory as identified in the *DII COE and Runtime Specification*; instead, it moves the original `SegDescrip` directory to `SegDescrip.orig` and creates a converted `SegDescrip` directory.

4.5 MakeInstall Tool

- C MakeInstall supports multi-volume tapes, but it will not divide segments across tapes.
- C MakeInstall is case sensitive. Segment names and prefixes must match exactly.
- C MakeInstall does not allow segments and their descriptors to be checked out from the repository.
- C MakeInstall does not support the `-Cd`, `-Co`, `-dio`, `-Dio`, `-ot`, `-R`, `-so`, `-So`, and `-T` command line options.
- C The `TOOLS_HOME` environment variable must be set for the device table to be displayed.
- C In order not to compress a segment, the `$NOCOMPRESS` option must be specified in the direct `SegDescrip` entry in the `SegInfo` file. MakeInstall no longer prompts the user with a compress option; instead, the tool automatically references the `SegDescrip` entry.
- C Components of an Aggregate segment (parent and all children) must be contained within the distribution file or completely external to the distribution file.
- C The `SEG_DIRS` environment variable must be set if the `-p` parameter is not used. In addition, the `SEG_DIRS` environment variable is not supported for multiple distribution files; as a result, when specifying multiple distribution files, the files must all reside in the current working directory. For ease of use, set the `SEG_DIRS` environment variable to contain the paths where the segments exist.

4.6 TestInstall Tool

- C The keywords "PC" or "Pentium" in the \$CPU field and "NT" or "SCO" in the \$OPSYS field are not valid on UNIX platforms.
- C Network Information Service (NIS) and Domain Name Service (DNS) servers are not updated when processing the Network descriptor.
- C The \$NETMASK keyword in the Network descriptor is not processed.
- C The \$HOME_DIR keyword in the Requires descriptor is not processed.
- C TestInstall does not support distributions. It supports segment test installation only.

4.7 TestRemove Tool

- C TestRemove does not remove services, groups, or password file entries.
- C TestRemove does not support distributions. It supports segment test removal only.

4.8 TimeStamp Tool

- C If a valid version line cannot be identified and no command line parameters are given, TimeStamp returns an error.

4.9 VerifySeg Tool

- C VerifySeg does not check the syntax of version numbers listed in the Compat Segment Descriptor file.
- C VerifySeg performs keyword parsing (searches for keywords and their associated fields) but does not perform validity (bounds or data field) checking in the Conflicts or VERSION descriptor file.
- C VerifySeg does not perform checking in the FilesList Segment Descriptor file.
- C VerifySeg performs validity checking (bounds or data field) on keywords but not on data associated with keywords (e.g., disk size in the Hardware Segment Descriptor file).
- C VerifySeg does not check keyword combination or keyword and segment type constraints in the Hardware Segment Descriptor file.

4.10 VerUpdate Tool

- C If a valid version line in the version file cannot be identified and no command line parameters are given, VerUpdate returns an error.

Public APIs

Please refer to the *DII COE API Reference Guide* and the *DII COE Programmer's Manual* for information on public APIs. For information on APIs specific to Helper Function, refer to the *DII COE Programmer's Manual for Helper Function*.

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